

IN THE CLAIMS

1-55. (Cancelled)

1 56. (Previously Presented) A system providing peripheral component
2 device interconnection, comprising:
3 a peripheral device processor for controlling operation of the peripheral device; and
4 a host messaging unit, coupled to the peripheral device processor, but separate from
5 the peripheral device processor, the host messaging unit retrieving host commands from a
6 host memory of a host separate from the host messaging unit without the use of the processor
7 of a peripheral device, validating the retrieved host commands and signaling to the host
8 memory a successful asynchronous transfer of the host commands from host memory to the
9 processor of the peripheral device.

1 57. (Previously Presented) The system of claim 56, wherein the host
2 messaging unit retrieves host commands from a host memory of the host without adding
3 process loading to a host processor of the host.

1 58. (Previously Presented) The system of claim 56, wherein the host
2 messaging unit provides signaling between the peripheral device and the discrete host
3 asynchronous to operation of the host and the peripheral device.

1 59. (Previously Presented) The system of claim 56, wherein the host
2 messaging unit is disposed external to the peripheral device and provides signaling between a
3 plurality of processors of peripheral devices and the host, the operation of the host messaging
4 unit being asynchronous to operation of the host and the processors of the peripheral devices.

1 60. (Previously Presented) The system of claim 56, wherein the host

2 messaging unit comprises:

3 a read controller, coupled to the bus, for determining when the host commands have
4 been provided to the host memory and for retrieving the host commands directly from the
5 host memory via direct memory access asynchronous to the operation of the host processor
6 and the peripheral device;

7 a write controller, coupled to the bus and to the read controller, the write controller
8 clearing the host memory to allow the host to infer that the host command has been read by
9 the host messaging unit;

10 a validator, coupled to the write controller and the read controller, the validator
11 determining a validity of host commands retrieved from the host memory;

12 a read clock, coupled to the read controller, the read clock providing a signal for
13 initiating reading of host commands from the host memory by the read controller; and

14 a busmaster command engine, coupled to the validator, read controller and bus, the
15 busmaster command engine initiating the command retrieval from the host memory when the
16 busmaster command engine receives a signal from the discrete host indicating host
17 commands are available in the host memory.

1 61. (Previously Presented) The system of claim 60, wherein the busmaster
2 command engine comprises a register programmable for indicating that the command is
3 available to be retrieved from the host memory.

1 62. (Previously Presented) The system of claim 60, wherein the read clock
2 is programmable to allow predetermined retrieval intervals.

1 63. (Previously Presented) The system of claim 60, wherein the read clock
2 restarts the predetermined interval after the host commands are retrieved from the host
3 memory.

1 64. (Canceled)

1 65. (Previously Presented) A method of servicing a peripheral component
2 interconnect device, comprising:
3 providing a host messaging unit operatively disposed between a host separate from
4 the host messaging unit having a host processor and a processor of a peripheral device for
5 providing a signal interface that operates asynchronously with respect to the operation of the
6 host processor and the processor of the peripheral device;
7 receiving at the host messaging unit a signal indicating that the host processor has
8 loaded a host command into host memory coupled to the host processor;
9 retrieving, using the host messaging unit, the host commands from host memory
10 without the use of the processor of the peripheral device;
11 validating the retrieved host commands at the host messaging unit; and
12 clearing the host memory by the host messaging unit to allow the host to infer that the
13 host command has been read by the host messaging unit; and
14 providing the host command to the processor of the peripheral device for processing
15 by the peripheral device processor.

1 66. (Currently Amended) The method of claim [[64]] 65 further comprising
2 retrieving, using the host messaging unit, the host commands from host memory without
3 adding process loading to the host processor of the host.

1 67. (Currently Amended) The method of claim [[64]] 65, wherein the retrieving
2 the host command directly from the host memory further comprises providing a clock to
3 control the initiation of the retrieval of the host command from the host memory at
4 predetermined intervals.

1 68. (Previously Presented) An article of manufacture comprising:
2 a program storage medium readable by a computer, the medium tangibly embodying
3 one or more programs of instructions executable by the computer to perform operations for
4 reducing bus transfer overhead between a host processor and a peripheral component
5 interconnect device processor, the operations comprising:
6 providing a host messaging unit operatively disposed between a host separate from
7 the host messaging unit having a host processor and a processor of a peripheral device for
8 providing a signal interface that operates asynchronously with respect to the operation of the
9 host processor and the processor of the peripheral device;
10 receiving at the host messaging unit a signal indicating that the host processor has
11 loaded a host command into host memory coupled to the host processor;
12 retrieving, using the host messaging unit, the host commands from host memory
13 without the use of the processor of the peripheral device;
14 validating the retrieved host commands at the host messaging unit; and
15 clearing the host memory by the host messaging unit to allow the host to infer that the
16 host command has been read by the host messaging unit; and
17 providing the host command to the processor of the peripheral device for processing
18 by the peripheral device processor.